User Manual

Galeo System

Galeo Cylindric Wave Unit
Galeo Sub
Galeo Flying Frame
Galeo Sub Flying Frame

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acoustic line
SEEBURG
Professional PA Systems

Contents

Foreword 3

Part 1 – General Information

Components 4
Safety instructions 5
Coverage 6
Possible combinations, groundstack Galeo 7
Combination with Galeo XT 9

Part 2 – Assembly and Rigging

Transportation 10
EASE Focus 11
Assembly and disassembly, flown operation 12
Assembly and disassembly, groundstack operation 15

Part 3 – System Start-up

System rack 16
Controller setups 17
Cabling 18
Sound optimisation 19

Foreword

The GALEO Line Array System is suitable for a wide range of sound applications for which a fast set-up, high sound quality, long throw and predictable directivity are crucial. It is particularly suitable for high-end permanent installations.
The Galeo Sub with integrated flying hardware for flown array applications and groundstack operation serves as a bass extension. Thanks to hornloaded bandpass technology in conjunction with the 18“ ND long excursion chassis with exceptionally powerful drive conceived exclusively for this unit, the Galeo Sub offers a high level of bass, lowest distortion and a long throw.

Please read this user manual carefully and follow the instructions provided. It should be within reach at all time when setting up the Galeo system in order to be able to find a solution to any queries.

With the purchase of a Galeo system you will have also received a structural analysis certificate that will provide information on the materials used and their maximum resilience.

Should you require additional information or have any helpful suggestions regarding this user manual, please contact

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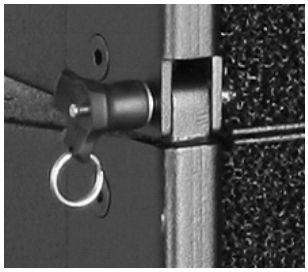
Part 1 – General Information

Components



The Galeo system comprises the Galeo Cylindric Wave Units and a compatible Galeo Sub bass extension of the same width and includes appropriate flying hardware.
Die Galeo Cylindric Wave unit is to be understood as an individual element within a line array sound system. In combination with several different units, a cylindrical sound wave is emitted, especially within the mid and high ranges, which has a longer throw than comparable omni-directional systems. The 3-point flying hardware with ball lock pins allows simple and fast assembly, facilitating curving angles between 0° and 7° in 1° stages.
The exclusive use of high-grade European-made components guarantees a high maximum sound pressure level with even horizontal directivity and excellent sound quality.

A Galeo unit is fitted with two 8“ low-mid drivers and one 1.4“ HF driver. The acoustic crossover frequency is approximately 900 Hz.
The two-way active operation is effected via system amping.

The chassis, which is made of an aluminium and multilayered birch multiplex composite is polyurea-coated, providing it with adequate protection against rain. Likewise, all diaphragms have a special coating.
The flying fittings are made of powder-coated steel, which also renders them weather resistant. However, after many years of use the coating of the fittings can become damaged and a light rust film may form on the steel parts if exposed to dampness for longer periods. Therefore, keep your Galeo system dry at all times and treat all critical areas regularly with suitable care products.
The Galeo Sub features two 18“ cone drivers and covers a frequency range from 35 Hz to 80 Hz.

Safety instructions

PA systems the size of the Galeo pose different types of risk:

- aurally

Even at a low power input the Galeo unit can produce a hazardous sound pressure level that may cause acute and permanent damage to the ear. Never sit or stand in the immediate vicinity of the loudspeaker during operation and always wear ear protection.

Observe the respective *German trade association regulation BGV B3* pertaining to noise

- mechanical

During assembly and disassembly, moveable devices and falling parts may cause serious physical injury.

Observe the respective *German trade association regulation BGV D8* pertaining to winches and hoisting gear (basic principles of prevention) as well as those regarding event and production facilities for the performing arts.

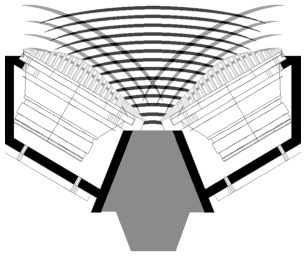
- magnetic and electrical

Even if not connected to a power source, loudspeakers produce a static magnetic field that can damage cards with a magnetic strip or delete sound recordings and the like. Amplifiers can emit dangerous voltage. This voltage is also present on free loudspeaker connectors. It is vital that these connectors are covered when not used or in wet conditions.

Observe the safety instructions of the amplifier manufacturer and the respective *German trade association regulation BGV A2* pertaining to electrical equipment and utilities.

Assembly and disassembly of a Galeo PA system must be carried out only by qualified personnel who are familiar with the corresponding regulations and adhere to and act in accordance with them. Please note that all quoted regulations are predominantly applicable in Germany. Work in compliance with the regulations applicable in the country you are in.

Coverage



In the case of large format PA systems, coverage is of the utmost importance. Very few listeners stand or sit directly within the axis of a line array system. Consequently, when developing the Galeo our engineers attached great importance to achieving totally symmetrical coverage that is evenly and horizontally distributed across the entire frequency range.
The midrange drivers feature cover panels according to the AMR™ (Air Mass Reflection) principle, which serve at the same time as sound guidance for the HF drivers.
Due to the specific arrangement, depth and quantity of boreholes, an ideal ratio between sound passage for the low-mid range and horn guidance for the high range is obtained.

The Galeo comes as standard with cover panels with which even coverage of around 120° is achieved within the mid-high range (Art. Nr. 00400). By exchanging the 120° panels for panels with an 80° horn function, the nominal coverage angle can be modified accordingly (Art. Nr. 0400/80). This modification is particularly useful in the case of the upper units of a line array system, when a broad coverage angle is not required but throw is to be increased. The front guard is held in place by 4 small neodymium magnets and secured via a steel cable (safety).
Vertical coverage is adjusted by curving and the angle of inclination (see EASE FOCUS).

Normally, the Galeo Sub has almost omni-directional sound distribution with a attenuation of –6 dB on the back side.
When using several Galeo Sub dps, the active version of the Galeo Sub featuring integrated power amps, it is possible to achieve kidney-shaped coverage. Behind the loudspeakers there is a broadband cancellation of approximately 20dB. This mode of operation is to be selected when the sound level produced by the subwoofer behind the loudspeaker box is considered unpleasant. For further information refer to the Galeo Sub dp user manual.
Likewise, the coverage angle of subwoofers can also be influenced by specific positioning and corresponding delays.

Possible combinations, groundstack Galeo

The lower cut-off frequency of the Galeo Cylindric Wave Unit is approximately 80Hz. Therefore, trouble-free speech or general corporate applications are possible without using an additional subwoofer.
However, in the case of disco or live events, the Galeo Sub will be required as an additional sub-bass extension. Fundamentally, there are three possibilities of combining the Galeo with the Galeo Sub.

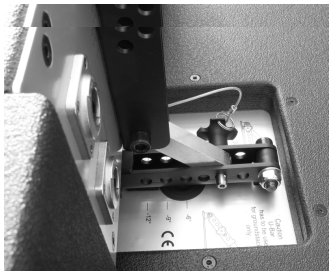
1. Galeo Sub and Galeo flown applications
Use the Galeo Sub flying frame Art. No. 01389 and hang the required number of woofers below it. A further Galeo Sub flying frame, to which Galeo units are attached, is mounted below the lowermost Galeo Sub. It is essential that you observe the permitted total load stipulated in the structural analysis certificate and the warning notices provided by EASE Focus.
The best acoustic results are obtained if both Galeo Sub and Galeo are flown within the immediate vicinity of each other (one below the other). Within the crossover frequency all sound emitting sources are close together in relation to the wavelength, resulting in an optimum addition. However, flown operation of basses does not facilitate ground-coupling. Therefore, the maximum level is lower in comparison to groundstack operation.
Never hang a Galeo Sub on the stacking device below a Galeo line array.

2. Galeo Sub stacked, Galeo flown
In practice, this arrangement is the most frequently used. Through curving and the angle of inclination of the flown Galeo, it is possible to achieve an ideal alignment of the mid-high range, whilst the directivity of the Galeo Sub can be influenced by differing line-up and delays. In addition, due to the comparably low crossover frequency of 80Hz, the subwoofers are normally not locatable. Thanks to the steep crossover of 24dB/oct, interference between the Galeo and the Galeo Sub is kept to a minimum.

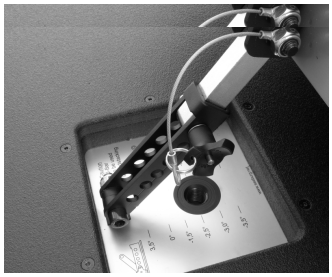
3. Galeo Sub und Galeo stacked

For groundstack operation of Galeo on top of Galeo Sub no frame is required. The Galeo units are mounted directly onto the stacking device of the Galeo Sub and the front spacer. This device offers a wide angular adjustment range so that the lowermost unit can also be inclined downwards on high groundstacks.

Observe the maximum stacking height for open-air events (danger in strong winds) and secure the entire stack in such a way as to exclude the possibility of toppling or movement.



For inclination angles ranging from 3.5° to – 3.5° the stacking device rests on the upper steel plate and is secured using the ball lock pin.

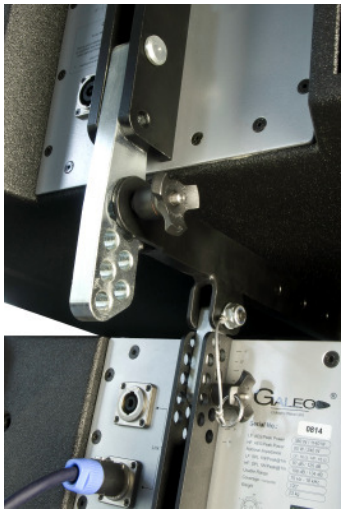


In the case of larger inclination angles ranging from -6° bis -12° the spacer of the Galeo is inserted into the stacking device and secured using the ball lock pin.
Alternatively, the Galeo flying frame can be extended into a stacking frame, so that it is also possible to stack the Galeo without the Galeo Sub. This set-up can then be mounted on TSE infra bass extensions placed horizontally on the floor.

For smaller sound applications a speaker pole can be screwed into the M20 thread of the Galeo Sub. The flying shackle Art. Nr. 01385 can be used for assembling up to two Galeo units.

The Galeo combined with the Galeo XT

Using a transition cradle Art. No. 01392, Galeo units can also be flown below a Galeo XT line array. Due to the specific geometry of the transition cradle, the cylindrical sound source within the mid-high range is continued; it can therefore be employed for virtually gapless down-fill operation with strong curving.
Featuring the same high frequency drivers and the same midrange driver arrangement, the Galeo can be regarded as the the Galeo XT's "little brother". Therefore, the Galeo can by all means be additionally employed when the given maximum level requirements within the mid-high range cannot be achieved using the Galeo XT on its own, or if strong curving is desired at the lower end of the line array. A maximum of 6 Galeo units may be attached to the transition cradle and the permitted maximum load for the Galeo XT flying frame must not be exceeded.



The transition cradle is secured in the upper borehole in the Galeo XT spacer of the lowermost unit using a ball lock pin. Galeo units are then attached as described later (Part 2 – and Rigging).

Remember that when setting up the Galeo and Galeo XT, the delay times for the mid and high ranges must have the same setting. A separate Galeo controller setting is necessary to ensure the ideal addition over the complete length of the array.

Part 2 – Assembly and Rigging

Transportation

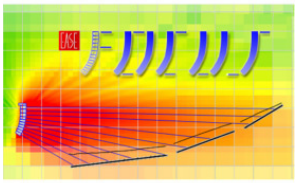
For transportation of the Galeo, four units are packed in a flightcase (Art. No. 16002). For assembly, either just the cover or the complete hood is removed from the case. The angle of the units stacked below each other must always be 0° in the flightcase, and the two ball lock pins for assembly on the flying frame should be located in the rear fitting of the topmost Galeo element. The short Speakon connector cables NL4 can remain on the elements. When replacing the hood on the case or lowering the Galeo line array into the case, ensure that the viewing windows are on the rear side of the Galeo. This will enable you to check completeness and serial numbers at a glance.

For transportation purposes the wheelboard Art. No. 01270 can be attached to the front of the Galeo Sub. Place both hooks (catches) in the upper and lower mounting eyes and then tighten the butterflies. Using the handle located on top the Galeo Sub can now be tilted forward onto the wheels.

For transportation in a truck or on inclined surfaces it is essential to engage the wheel brakes of the Galeo flightcase. The Galeo Sub is placed upright on the floor space to prevent rolling.

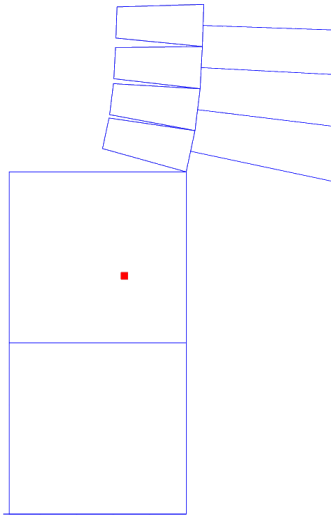
For transporting two Galeo flying frames a separate accessory flightcase Art. No. 16003 is available in which replacement ball lock pins can also be stored. The Galeo Sub flying frame can remain attached to the Galeo Sub during transportation.

EASE Focus



Make use of the Galeo system's acoustic and mechanical simulation software EASE focus. It is available for download in the respective download area of our website www.seeburg.net. This software facilitates simple simulation of how the inclination and angle of the Galeo should be adjusted for obtaining the ideal sound for the audience area. When using the programme, observe any warning instructions and check the provided data for plausibility.

Normally, the best results are achieved if the line arrays are pointing just above the heads of the audience and not hanging too high. As a rule you should try to be content with small curving angles and use the auto-splay function.
The lowermost unit should be hung just above the heads of the persons on stage. The entire line array can then be operated one below the other with the boxes set at a slight angle to make full use of the advantages of acoustic coupling (cylindrical wave). In addition, the amount of rigging required is reduced due to the fact that the system is flown only from one single point. If greater overall inclination angles than those obtainable with pinpoint 10 are required (explicit entry of inclination angle and not the pinpoint), the array must be raised to slightly below the centre of gravity via one or more additional straps.



Print out at least the mechanical data provided by the EASE Focus simulation software in order to be able to adjust the degree of inclination and the angle exactly according to the instructions. Slight deviations can bring about significantly modified acoustics.

General information on the use of the EASE Focus Aiming Software is available on the internet at www.easefocus.de.

For more accurate simulation incorporating room characteristics, system data for EASE 4.0 is also available in the download area of our website www.seeburg.net.

Assembly and disassembly – Flown operation

Assembly and disassembly of the Galeo system must be carried out by qualified personnel only. Every technician or staff member working with the system must have access to this user manual and the structural analysis certificate and be familiar with the most essential contents.

Only use chain hoists permitted in accordance with BGV C1 or BGV D8+ respectively if there are any persons sitting or standing under the loudspeaker system. Ensure that chains do not become entangled with ball lock pins or cables. Bypass the motor with a steel cable (dead hung) or ensure that a second, independent and sufficiently dimensioned securing device is available. Only use accessories that conform to BGV C1 requirements and carry out all other work in compliance with BGV A1 or BGV C1 regulations respectively. These trade regulations can be viewed on the internet at www.arbeitssicherheit.de

Do not assemble an array of Galeo loudspeakers that is not covered by the structural analysis certificate or has not been separately certified by a qualified person.
The structural analysis certificate contains the following cases for flown operation using the **Galeo flying frame**.

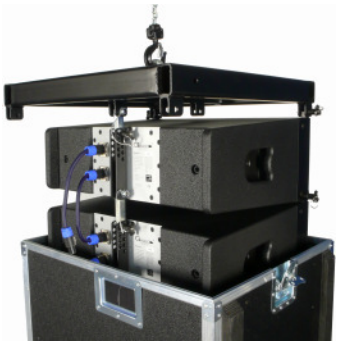
- up to 8 Galeo on pinpoint 6…10 (freely suspended)
- up to 12 Galeo on pinpoint 1 with up to 20° overall inclination angle /curving via an additional vertical bracing at the centre of gravity.
- Up to 16 Galeo on pinpoint and use of the 0°, 2°,4°, and 6° insertion points.

The structural analysis certificate contains the following cases for flown operation using the **Galeo Sub flying frame**:

- up to 2 Galeo Sub on pinpoint 6
- up to 6 Galeo Sub or 2 Galeo Sub and 8 Galeo on pinpoint 1 and 12 respectively, with a double-strand suspension system set at a 60° bridle angle.

Using the system at wind force 8 and above is not permitted. From wind force 6 operation is to be discontinued and the complete array placed on the ground and firmly secured.

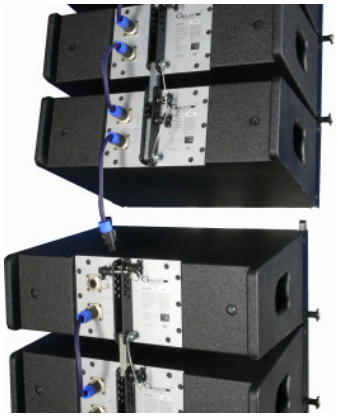
Attach a Galeo line array only to flying points which have sufficient carrying capacity and are adequately dimensioned to bear heavier loads. If there are even the slightest concerns regarding correct dimensioning, either do not attach the system or arrange for the provision of the respective structural analysis certificate.
The flying hardware of the Galeo system must be in impeccable condition. Lifting and load-bearing accessories must not show any signs of damage that may affect their function. Do not climb up the Galeo line array in order to change the inclination angle and the like.
Danger of crushing to hands and fingers during adjustment of curving!



Assembly and disassembly can be carried out by just two persons. The fully equipped Galeo case is rolled under the flying point, after which the lid of the flightcase (not the entire hood) is removed. Now assemble the flying frame and attach the shackle in the pinpoint according to the EASE Focus simulation to the chain hoist using an approved and adequately dimensioned shackle (BGV C1). Use the chain hoist to remove the line array from the flightcase and then set the degree of angulation:

Whilst one person relieves the strain, the other person removes the rear ball lock pin from the unit of which the curving angle is to be adjusted. The ball lock pin is then reinserted into the respective borehole.

When flying the Galeo Sub, adhere to the following procedure: Hoist up a bass speaker first, place the second one below it and place the upper one on top of it. Connect the speaker boxes via all four spacers using ball lock pins.



After setting the degree of angulation, the already suspended array is hoisted up and lifted to working height. Further units can now be attached. In the case of longer arrays this procedure can be disadvantageous, particularly when the lowermost units are strongly angulated. These units are then individually raised up to working height and attached to the existing array.
This also applies of course if there is no possible ground-level access to the flying frame.

Always first connect the units using the front ball lock pins and do not adjust the degree of angulation before the units have been securely connected. Ensure that the ball clearly protrudes from the other side of the fitting and that the pin cannot be withdrawn.

Never under any circumstances should you attempt to withdraw a ball lock pin that cannot be easily moved by hand. In this case force is still in effect at the connecting point and releasing the pin can result in an abrupt jolting of the entire speaker array. Do not use tools. Never loosen the front connection only on one side and avoid any tilting of the housing in order not to damage the flying hardware.
Never attempt to withdraw a ball lock pin without first pressing the fastener in the centre.

M10 DIN 580 eye bolt

Twisting of the line array can be avoided by the use of additional, usually unencumbered bracings. These can also prevent swaying in windy conditions. For this purpose use boreholes in the rear flying fitting or screw eye bolts DIN 580 into the respective M10 points on the rear side.

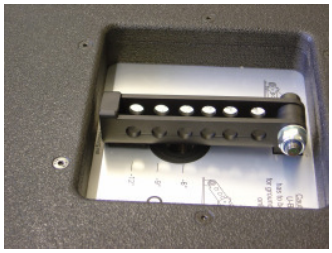
Disassembly is carried out in reverse order. Always loosen the rear connections first, then the ball lock pins on the front side. Then place the array on the ground and set all elements to 0° before replacing into the case.

Assembly and disassembly – groundstack operation

Galeo groundstack, short extenders at front, long extenders at rear

Using the stacking frame (reversed flying frame with extenders), a stacked Galeo array of up to 6 elements is possible without further ballasting. Insert the extenders into the holes in the flying frame and secure these using ball lock pins according to the assembly instructions.
The floor space must be skid-proof, clean, even and sufficiently sustainable. Due to possible wind force, the top edge of the array must not be higher than 5m above ground level. Observe the structural analysis certificate.
Larger arrays are possible of course, but these must then be braced and secured accordingly in order to prevent toppling in windy conditions (separate certificate is required!).

Do not assemble groundstacks in areas that are accessible to the public or where they can possibly even be knocked over in a panic situation.



Using the stacking device on the top of the Galeo Sub, the Galeo can be mounted directly onto the Galeo Sub without the need for further stacking frames or similar devices. Stack the woofers first and connect them via the fittings. Then stack the Galeo units on top of the woofers.

The structural analysis certificate contains the following cases for **stacked** operation at open-air events and up to wind force 8:

- up to 6 Galeo on 1 Galeo Sub
- up to 6 Galeo on the groundstack frame with extenders

Part 3 – Startup

6HE DD System rack

System racks

System racks for Galeo applications are available ex factory. They consist of:

- 4-channel amplifier lab.gruppen FP 10000 Q for the mid-high range (4x2500W/2 ohms)
- 2-channel amplifier lab.gruppen FP 7000Q for the low range drivers (2x3500W/2 ohms)
- 2 in 6 system controller BSS OmniDRIVE compact plus FDS 366 T
- Connection panel with XLR inputs/loop thru and 4xNL4 Speakon out for connecting Galeo und Galeo Sub
- Power supply 32A CEE with loop thru for up to 2 system racks connected to a 32A CEE socket

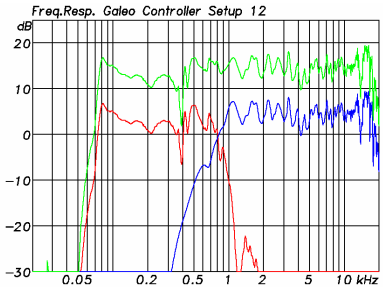
These configured system racks offer maximum possible reliability. Other configurations are optionally available if desired.

The wheelboard is connected to the rack with two standard M8 screws and is centred above the rubber feet. Therefore, it is possible to easily remove the wheelboard in order to stack the system racks on top of one another if only limited space is available.

Use the system racks in accordance with the instructions provided by the manufacturer of the installed components. This comprises in particular protection against dampness and rain, the operating temperature range and the securing of an adequately dimensioned power supply.

Controller settings

In addition to inclination angle and curving, correct configuration of the system controller has a decisive effect on the Galeo Line Array's sound characteristics.



Frequency response Galeo

As sound perception and use of the system differ greatly, only basic settings are proposed, the equalising of which must be effected on location. Here mainly the crossover frequency with slew rate and filter type are predefined and the frequency response settings of the individual paths required for the functioning of the system. The limiter and delay values are optimally set at the factory and should not be changed.

The system controllers are supplied with settings for 4, 6 and 8 elements. The longer the speaker array, the more the low and mid ranges are amplified by acoustic coupling, meaning that these must be lowered in the controller . However, experience shows that longer arrays are usually also used to achieve higher sound intensity. The corresponding increase in the low and mid ranges accommodates the listener's natural perception of sound volume and should not be entirely compensated.

Adapting to taste and room application should always be effected on the master equaliser or the input equalizer of the system controller in order not to affect the phasing of the single paths in relation to each other at the crossover frequency.

Cabling

The Galeo units are connected to each other and to the system rack by means of 4-core NL4 Speakon cables. Use only high-quality 1:1 configured, flexible speaker cables with Neutrik plugs. The impedance of both paths is 16 ohms per loudspeaker box. Therefore, four units can be used simultaneously with a 4 ohm amplifier using 30cm loop thru cable, and up to eight Galeo on a 2 ohm amplifier.

The Galeo Sub also has NL4 connectors, impedance is 4 ohms. Two Galeo Subs can be used simultaneously (loop thru) with 2 ohm amplifiers.

For events necessitating permanent and extremely high demands on the power amplifier's performance, 2 ohm operation is not recommended, even if the amplifier manufacturer has specified this mode of operation. Therefore, to achieve optimum operational safety, combine a maximum of six Galeo units per amplifier channel (2.7 ohm operation).

The pin configuration of the speakon sockets is printed on the connection panels of the system rack and speaker cabinets.

Galeo
1+/1- 1.4" Hi
2+/2- 8" Low-mid

Galeo Sub
1+/1- not connected
2+/2- Low

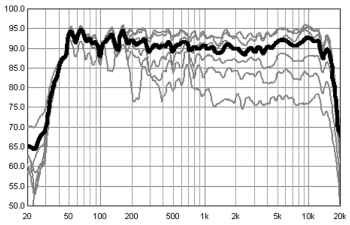
In order to relieve strain on the Speakon connectors when using long speaker cables during flying operation, use a cord grip, which can be attached to the lower boreholes in the rear flying fitting or directly onto the flying frame.
Avoid using long cables, but if long distances are unavoidable, use 4 x 4mm² cable instead of the normal 4 x 2.5mm² cable to keep voltage drop to a minimum.

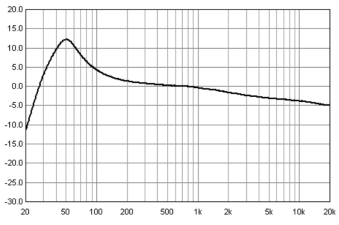
Sound optimisation

In order to be able to fully utilise the performance capability of the Galeo system, you should adapt the sound system to the prevailing conditions and the respective setup at each location.

The actual size of the sound application area should have already been predetermined during the EASE Focus simulation. The absolute throw is often less important than the production of superb sound between the stage and FOH position.

When optimising, use music you are totally familiar with as well as tried and tested computerised measuring technology, incorporating a sufficiently linear measuring microphone. For frequencies below 1kHz we recommend boundary surface measurement for the purpose of which the microphone is laid on the floor. Ensure that the floor is reverberant in the vicinity of the microphone. For optimisation of frequencies above 1kHz the microphone is placed on a normal microphone stand. Never effect optimisation based on one single microphone position, but on the average of several measurements over the entire audience area. This is the only way to ensure that the majority of listeners will benefit from optimum results. As a rule slight dips in the frequency response curve will be less irritating than narrowband peaks, this being the result of psycho-acoustic spectral occlusion.





Potential optimisation target curve

In the case of loud music reproduction do not attempt to equalise to a linear frequency response but, as a first approximation, towards an off-peak curve from low to high frequencies with slightly raised bass.
It may become necessary to lower frequencies within the 2….4kHz region, as the ear is relatively sensitive within this range.

Appendix

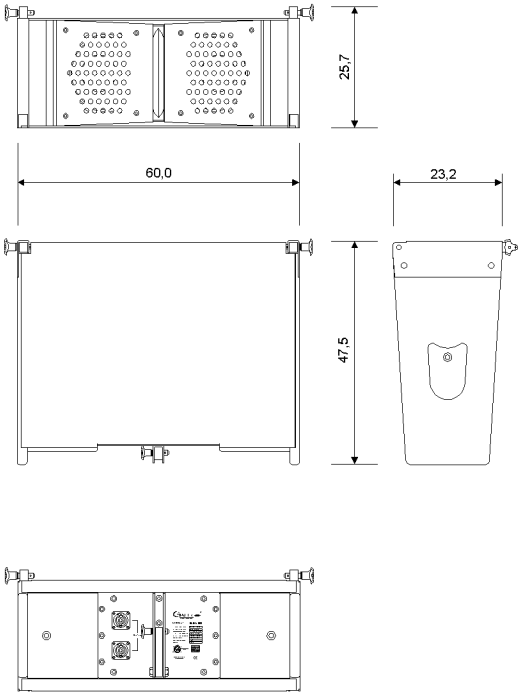
GALEO®

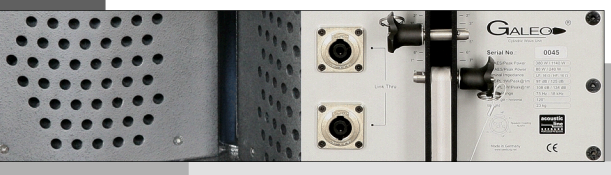
Cylindric Wave Unit

The GALEO Line Array System covers a wide range of acoustic applications for which a fast setup, high sound quality, long throw and predictable directivity are important. It is particularly suitable as a low profile large format PA system for a high performance permanent installation. The narrower bundling 80 degree version of the GALEO system was developed especially for narrower hearing ranges and, thanks to its patented Air Mass Reflection principle, is characterised by extremely precise and even directivity.

PRODUCT SPECIFICATIONS (for one unit GALEO 120°)

Speaker Components	2x 8“ Neodym / 1,4” Neodym
Description	two-way line array unit
Powerhandling - AES / Peak	LF: 380 Watt / 1140 Watt
	HF: 80 Watt / 240 Watt
Impedance - nominal	LF: 16 Ohm / HF: 16 Ohm
SPL 1m - 1Watt / Peak	LF: 97dB / 125dB
	HF: 108dB / 134dB
Usable Range	75Hz - 18kHz
Coverage - horizontal	120°
- vertical	7°
Rigging	Integrated flying hardware
Handles	2x 4D handle
Finish	Polyurea coating
Weight	23,0kg
Size - height x width x depth	25,7(23,2) x 60,0 x 47,5 cm
Trap angle	2x 3,5°
Connectors	2x 4-pin Neutrik Speakon
Art. Nr.	00400





acoustic line SEEBURG Professional PA Systems

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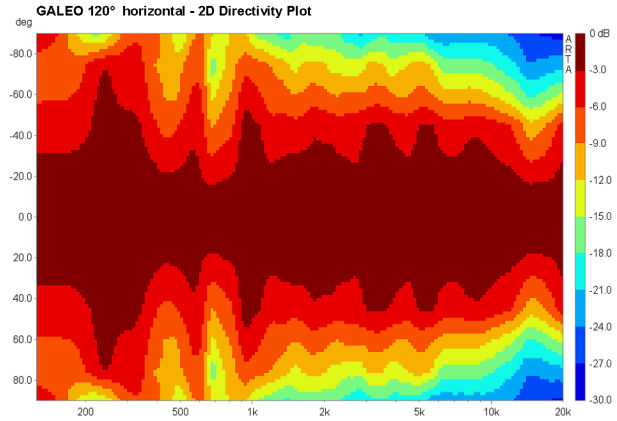
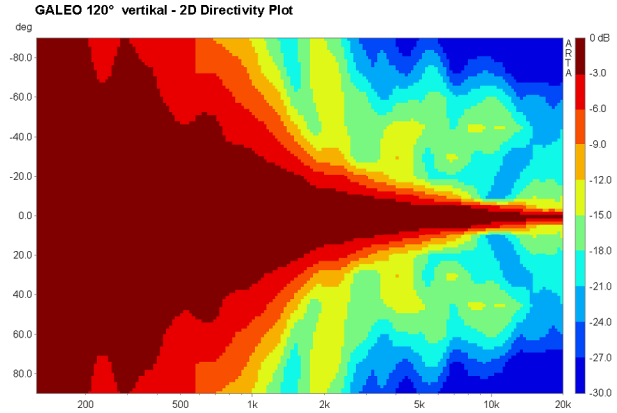
Cylindric Wave Unit



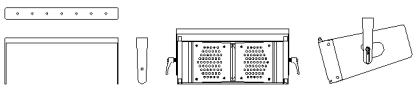


For more information, please visit our Data CD-Rom

Accessories (more accessories you can find in our general list of accessories)

Flying Bracket for GALEO incl. screws

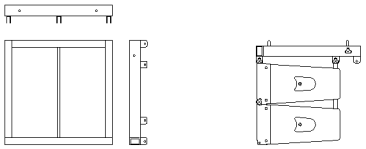
(per unit: 2 pcs M10 x 70 adjustable clamping lever)



Order number: 01385 set

Flying Cradle for GALEO System incl. accessories

(2 pcs. 25 mm Ball Lock Pins and 82 mm Distance Bar)
- also for groundstack



Order number: 01381

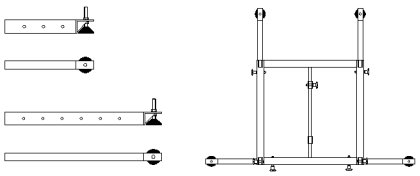
Steel support for GALEO groundstack incl. accessories

- length 30 cm, add. 45 mm Ball Lock Pin, adjustable

Order number: 01383/30

- length 60 cm, add. 45 mm Ball Lock Pin, adjustable

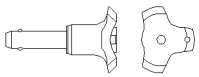
Order number: 01383/60



GALEO®
Cylindric Wave Unit

Ball Lock Pin for GALEO Sytem

25mm Grip or 45 mm Grip



Order number: 01380 (25mm)
Order number: 01380 (45mm)

Shackle heavy duty with safety device, WLL 3250kg

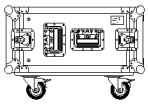
Order number: 01372 / 3250kg

Lifting eye bold - male - M10 DIN 580

Order number: 73700 (M10)

Systemrack 6 HE

For example:17 kW / 2 Ohm with the following components:
- Connection Panel 1 HE
- Digital Controller
- LAB FP 10000Q
- LAB FP 7000Q
- PD32



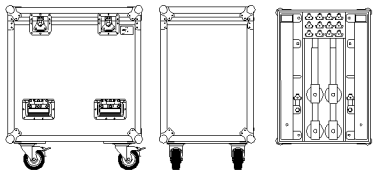
Order number: 99999

Mode of transport

The GALEO system can be delivered in flightcases, assembled as quadruple units ready for use. An accessory case is additionally available, accommodating the two flying cradles, the connecting cables and further accessories.

Flightcase for 2 pcs. GALEO flying cradle

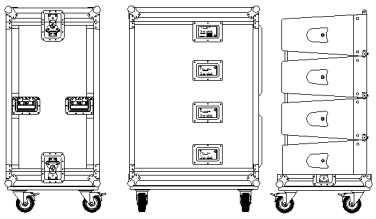
Heavy duty version - compact size
Inserts for accessories



Order number: 16003

Flightcase for 4 pcs. GALEO

Standard version - heavy duty

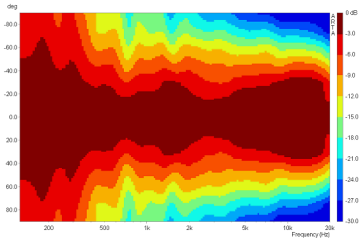


Order number: 16002

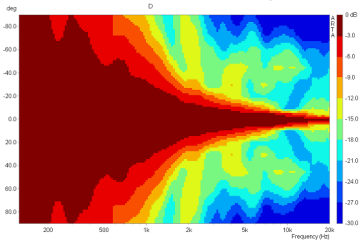
GALEO 80°

The narrower bundling 80 degree version of the GALEO system was developed especially for narrower hearing ranges and, thanks to ist patented Air Mass Reflection principle, is characterised by extremely precise and even directivity.

GALEO/ 80 horizontal - 2D Directivity Plot



GALEO/ 80 vertikal - 2D Directivity Plot



Conversion kit 80°: Order number: 08141
(consisting of 2 pcs. reflectors incl. mounting material)

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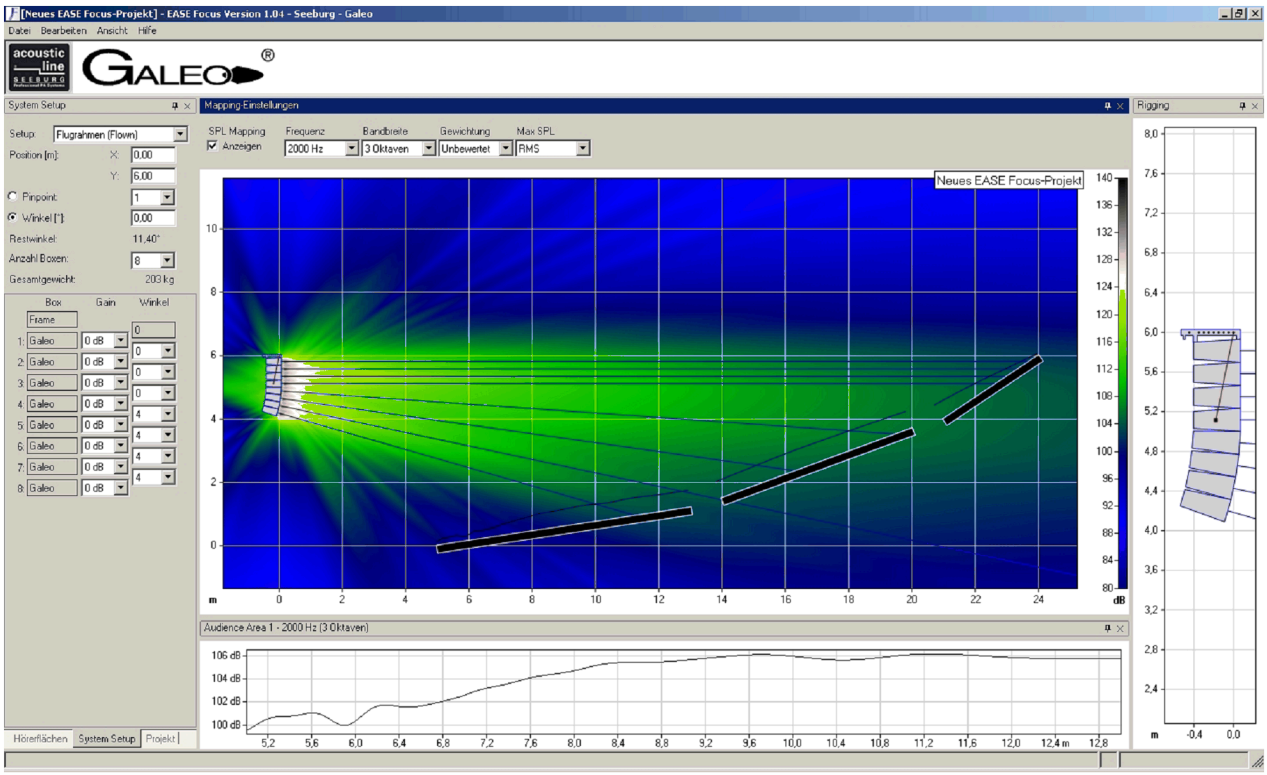
Simulation program

For calculating the splay angle and the anticipated sound level ratios, the simulation software EASE FOCUS, which was adapted exclusively for the GALEO system, is provided.
After completion of the simulation, a printed version can be made available as a Word-document for use as a technician´s installation guide.



Printed version as Word-document

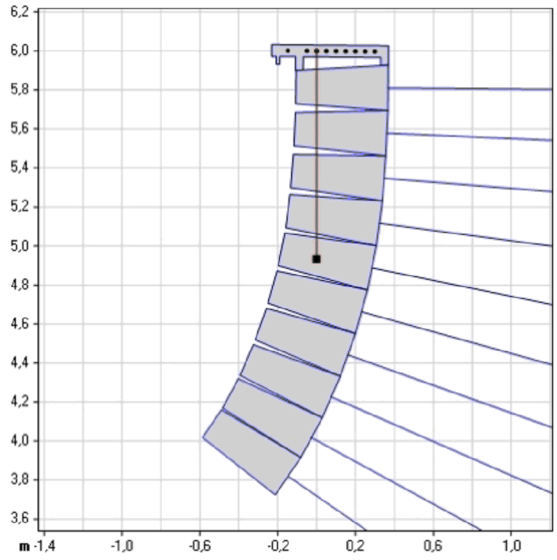
Projekt Details

Projekt:	Galeo
Autor:	SEEBURG acoustic line
Kommentar:	

System Details

Hersteller:	Seeburg
System Setup:	Galeo
Pick Point:	X=0,00 m Y=6,00 m
Winkel:	-0,52°
Pin Point:	7 (Restwinkel=0,00°)
Framegewicht:	19,00 kg ("Flugrahmen")
Boxgewicht:	230,00 kg ("Galeo")
Gesamtgewicht:	249,00 kg
Höhe:	2,31 m

Rigging



Rigging Details

Nr.	Box	Gain	Winkel
Frame	**Flugrahmen**		
			0
1	**Galeo**	0 dB	
			2
2	**Galeo**	0 dB	
			2
3	**Galeo**	0 dB	
			3
4	**Galeo**	0 dB	
			4
5	**Galeo**	0 dB	
			4
6	**Galeo**	0 dB	
			4
7	**Galeo**	0 dB	
			4
8	**Galeo**	0 dB	
			5
9	**Galeo**	0 dB	
			6
10	**Galeo**	0 dB	

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